

# Iman Tabrizian

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## EDUCATION

### AMIRKABIR UNIVERSITY

#### BS IN COMPUTER ENGINEERING

2014 - 2018 (Expected) | Tehran, Iran

Cum. GPA: 18.13 / 20 or 3.78 / 4.0

## RESEARCH INTERESTS

Internet of Things

Cloud Orchestration

Software Defined Networking

## LINKS

Github:// **Tabrizian**

LinkedIn:// **tabrizian**

StackOverflow:// **iman**

## SKILLS

### PROGRAMMING

Over 5000 lines:

Java • Python • Javascript

Android • Node.js

C • C++ • VHDL • PHP

Over 1000 lines:

CSS • Assembly

Familiar:

MySQL • Verilog • MongoDB

### FRAMEWORKS

ONOS • Docker • Swarm

Kaa IoT Platform

Lelylan IoT Platform •

OpenStack • Open vSwitch •

Mininet • Hapi.js • Vue.js

## AWARDS

- top 10% in terms of cumulative G.P.A
- Offered direct admission to continue graduate studies
- Eligible to choose second major
- Ranked 1<sup>st</sup> among all entrance university students in 14<sup>th</sup> Amirkabir ACM-ICPC
- Top 0.7% in the national university entrance exam

## RESEARCH & DEVELOPMENT EXPERIENCE

### AUT IOT LABORATORY | RESEARCHER & DEVELOPER

Jan 2016 – Nov 2016 | Tehran, Iran

- Experimenting with Kaa to provide a Building Automation solution. This project used nRFs for providing connectivity for sensors and used Raspberry Pi as the gateway which connected to the internet.
- Development of an IoT platform with the ability to support logging, event triggering, scenario creation. It was based on the MQTT protocol for the reliable and bidirectional communication between IoT devices. Under supervision of **Prof. Bahador Bakhshi**

### FARZAN FAN ANDISH FARDA | RESEARCHER & DEVELOPER

Jun 2016 – Current | Tehran, Iran

- Development of a product for remote management of 250 welding robots for IKCO - leading car company in Iran. The solution that we proposed simplified the provisioning process extremely and helped them increase the number of welding robots in each production line.
- R&D for development of an IoT based assembly platform which eased the production of hard to assemble products. This platform used MQTT as the messaging broker and Node.js as the backend providing restful web services for things connecting to them.

## PROJECTS

### GENORCH | PYTHON

Development of a generic orchestration platform with the ability to auto scale the infrastructure of an application based on the user defined criteria. It is written extremely modular and currently supports OpenStack It is an open source project you can view the source code:

github.com/genorch/orchestration It was tested on SAVI (testbed of University of Toronto).

### AN AUTO-SCALER FOR DOCKER SWARM | Go

Final year dissertation

In this project I'm supposed to provide an auto-scaler for Docker Swarm. Currently, Docker Swarm doesn't provide any automatic horizontal scaling of containers and only load balances between static number of containers. In this project I'm supposed to provide an auto-scaler for Docker Swarm which enables developers to define a criteria and an action that should be taken on this criteria to define the automatic scaling policy of their applications.

### BAMBOO | NODE.JS

Bamboo is an IoT platform whose architecture is based on microservices. I was the architectural designer of bamboo and how components should be divided. It is using MQTT message broker for connectivity. You can find out more about it here.

## LANGUAGES

English: professional working proficiency (TOEFL iBT 107)  
Persian: Native proficiency

## TEACHING

- Teaching Assistant 3x
- Instructor of Programming with C++ at Rouzbeh High School for 3 years.

### **IRAN METRO | ANDROID**

A transportation application for Iran subway system. It currently has more than 20,000 active users. It was selected as the BESTS APP of THE WEEK by cafebazaar (Iranian Android Market) when it was launched.

### **MERGER | NODE.JS**

This project was developed based on the request from the ICT of Amirkabir University of Technology. **Merger** fetches data from the different academic sources namely, Elsevier, IEEE and Crossref, merges this data into a unified format and converts them to appropriate database models.

## EXTRA CURRICULAR ACTIVITIES

### **8TH LINUX FESTIVAL | VIRTUALIZATION WORKSHOP**

2017 | Amirkabir University of Technology

I was the instructor about the virtualization technologies in general and how to use Docker specifically for containerization.

### **NODE.JS SUMMER COURSE | INSTRUCTOR**

Summer 2017 | Computer Department Scientific Committee

Teaching Node.js basics from the ground to web application and bot development.

### **7TH LINUX FESTIVAL | LINUX BASICS PRESENTER**

2016 | Amirkabir University of Technology

I had a 20 minutes talk about code editing in Linux and about best practices in code editing.

## PUBLICATIONS

### **GENORCH - A TOOL FOR LARGE-SCALE, CLOUD VENDOR NEUTRAL DEPLOYMENTS | NETSOFT 2018**

This paper is still in progress and is supposed to describe what we have done in Genorch Project (more detail in the project section) to tackle with the problem of large-scale and multi-cloud deployments.

## REFERENCES

### **BAHADOR BAKHSHI | ASSISTANCE PROFESSOR**

Amirkabir University of Technology, Department of Computer Engineering and Information Technology

Email: bbakhshi@aut.ac.ir

### **MEHDI DEGHAN | PROFESSOR**

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### **MASOUD SABAEI | ASSOCIATE PROFESSOR**

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